

## **PHLP Roman road ground probing procedure**

### **1 Equipment required:**

Measuring tape 30m long, a number of poles and a map-reading compass.

GPS meter and levelling device (2 poles per 5m, 5m+ tape, 2m steel tape, a light-weight hanging level and high-visibility, stretch-resistant string).

Probes, circa 8-9mm diameter and long enough to penetrate 300-400mm into the ground.

Steel tape measure for measuring depth of penetration to stone(s), if present.

Clipboard with recording sheet and writing equipment.

### **2 Introduction:**

In the recording sheet's top box, record relevant local detail, such as name of area or farm/field number with a 12-figure map reference (use the GPS meter). These notes could include land-use and site disturbance (woodland, farmland and evidence of planting, ploughing (Ridge and Furrow), drainage and old hedge-lines), aspect of area, altitude, presence of streams and any exposed geology. Nearby stream gullies and the local geology map may provide supportive data of the presence of glacial till or bed-rock. Horizontal terrain may imply the existence of alluvium and lag-deposits, while slopes may show shallow water-channels. Use this box to note the references of any evidence of an agger on LIDAR, old OS maps or estate/farm maps.

### **3 Methodology:**

a) Identify suspected line of road, estimate its orientation and, using the compass, record the magnetic bearing. Select a location where there is a prospect of remains being preserved. Place a pole to mark the estimated centre of the road and record its GPS position in the centre of your sheet at the 0m mark.

b) Stretch out the long tape perpendicular to the line of the road placing the 15m point at the central pole. Fix 2 more poles at these extreme points and record the GPS positions of both ends of the tape. Make sure you have 3 GPS readings covering 30 metres. By line of sight, the 3 poles should be in a straight line and this is your survey transect.

c) Working along the transect, stretch the line tightly between the central and another pole, which is 5m away and tie it securely. Check that it is horizontal by hanging the hanging level centrally on the line. For every metre, measure and record the height difference between the line and the ground using the steel tape. Remember to record from the central 0m point on the recording sheet. To save time, do the measurements needed for points d) and e) at the same time. Repeat this procedure in 5m sections until you reach 15m from your centrally-chosen point.

Repeat this procedure for the other 15m, so that you have recordings over a total of 30m. These lengths can be reduced, if it is thought appropriate.

d) At the same time as c), probe every metre from the centre outwards (ie. at 31 locations). Record stone (S), gravel (G) by a gritty sound, or blank with depth of penetration below ground surface. Use the same proforma for all these c) and d) recordings. If stone is identified at a fairly consistent depth across part of the section, do some extra probing at 0.5m intervals (or closer if thought appropriate).

e) If there is an indication of stone hits being concentrated over a width which might indicate a road, repeat the process about 10 metres away along the suspected road and complete another cross-section. Repeat every 10m.

### **3 Results:**

These height differences will allow you to draw accurate cross-sections of the shape of the ground and the shape of any buried stone surface on your recording sheet. Join the ground level and stone depths on each cross section. Using the 12-figure grid references, locate the cross section(s) on LIDAR and topographical maps.

### **4 Interpretation:**

A succession of closely spaced stone 'hits' at a consistent level is indicative of a road surface, not necessarily Roman. A 1m test-dig or series of test digs might be warranted.

### **5 Participants:**

Record names of members of group.